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Crystal Growth and Roughening of Solid D_2

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Abstract

By observing the difference in D_2 crystals grown at various temperatures, the roughening transition of the $(10\bar{1}0)$ crystal plane is suggested to be 16.2K. Below this temperature, crystals grow in the shape of a well formed hexagon, while above this temperature the edges of the crystals become rounded. Facets have been observed on two other crystal planes, (0001) and $(11\bar{2}0)$, up to the triple point. The surface energy of these planes is estimated from their roughening temperatures.

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